

What is claimed is:

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B17 1. (Amended) A multi-media information playback device which  
plays back multi-media information [recorded in a recording medium] comprising:

(a) a [disc] recording medium having pieces of page information,  
[successively] stored in a storage area, each piece of page information being  
5 made up of multi-media information that describes contents of a plurality of  
screen images, the page information including;

(1) a partial image list having a pair of partial image  
information showing a partial image of a screen image and display  
state information showing display state of the partial image, and

10 (2) control information which describes a command to be  
executed according to an input signal, including a display state  
change command instructing to change the display state of the partial  
image;

15 (b) a page information read means for reading a piece of page  
information from the [disc] recording medium;

(c) a display data creation means for creating display data of the  
screen image by placing the partial image shown by the partial image  
information on a screen;

20 (d) a display means for displaying each display data created by  
the display data creation means;

(e) an input means for receiving an input signal from an operator; and

(f) a command execution means for detecting the input signal inputted by the operator, judging whether the input signal corresponds to the command described by the control information in the page information read by the page information read means, and instructing the display data creation means to create new display data by changing the display state of the corresponding partial image according to the display state change command when the input signal corresponds to the display state change command;

wherein the display data creation means creates new display data according to the command execution means.

2. The multi-media information playback device of claim 1, wherein the page information includes:

- (a) the partial image list;
- (b) the control information including an animation display command instructing to change and display the display state information of the partial image corresponding to elapsed time; and
- (c) time sequence control information including animation control information which describes values of the display state information of the partial image corresponding to the elapsed time;

wherein the command execution means includes:

- (a) a first timer for measuring the elapsed time after start of activation; and
- (b) an animation display command execution unit for activating the first timer when an input signal corresponding to the animation display command is detected, calculating values of the display state information corresponding to the elapsed time of each of the partial images based on the animation control information at predetermined times, instructing the display data creation means to create new display data by changing the display state of the partial image according to the calculated values of the display state information, and stopping the first timer when execution of the animation display command is completed;

wherein the display data creation means creates new display data according to the animation display command execution unit.

3. The multi-media information playback device of claim

2, wherein the page information includes:

- (a) the partial image list having a pair of the partial image information and display state information, the display

state information including X-Y coordinates showing a display position of the partial image to be displayed on the screen. X-Y enlargement rates showing a ratio of size of the partial image shown by the partial image information and a partial image to be displayed on the screen, and a rotational angle between the partial image shown by the partial image information and a partial image to be displayed on the screen; and

(b) time sequence control information including the animation control information which describes at least one among the values of the X-Y coordinates, the X-Y enlargement rates, and the rotational angle corresponding to the elapsed time;

wherein the animation display command execution unit includes:

(a) an X-Y coordinates calculation unit for calculating the X-Y coordinates corresponding to the elapsed time based on the animation control information at predetermined times;

(b) an X-Y enlargement rate calculation unit for calculating the X-Y enlargement rates corresponding to the elapsed time based on the animation control information at predetermined times; and

(c) a rotational angle calculation unit for calculating the rotational angle corresponding to the elapsed time based on the animation control information at predetermined times.

4. (Amended) The multi-media information playback device of Claim 3, wherein there is at least one storage area on the [disc] recording medium for [successively] storing page information and at least one storage area for [successively] storing time sequence information, the page information including:

(a) the partial image list,

(b) the control information including a time sequence processing start command instructing to start execution of time sequence processing corresponding to the elapsed time, and

(c) time sequence control information including time sequence processing control information having a name of time sequence information to be played back according to the time sequence processing start command, IDs showing contents of the

time sequence information to be played back at predetermined  
times, and playback state information describing how the time  
sequence information should be played back in accordance with  
display of the partial image shown by the partial image  
information in the partial image list;

wherein the time sequence information has information,  
which should be played back according to the elapsed time,  
stored in order of playback;

wherein the command execution means includes:

(a) a second timer for measuring the elapsed time  
after the start of activation; and

(b) a time sequence processing execution unit for  
activating the second timer when an input signal corresponding  
to the time sequence processing start command is detected,  
designating contents of the time sequence information  
corresponding to the elapsed time, and stopping the second timer  
when playback of the time sequence information is completed;

wherein the multi-media information playback device  
further includes:

(a) a page storage means, which is implemented by  
RAM, for storing the page information read by the page  
information read means;

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(b) a time sequence information read means for reading the time sequence information designated by the time sequence processing execution unit from the [disk] recording medium; and

(c) a playback means for playing back the time sequence information read by the time sequence information read means, and instructing the display means to display the time sequence information.

5. The multi-media information playback device of claim 4, wherein the page information includes:

- (a) the partial image list.
- (b) the control information, and
- (c) time sequence control information including time sequence processing control information having a name of first time sequence information as time sequence information to be played back according to the time sequence processing start command, IDs of sound information to be played back at predetermined times, and playback state information which describes how sound information should be played back in accordance with display of the partial image shown by the partial image information in the partial image list;

wherein the time sequence information includes the first time sequence information comprising sound information corresponding to the ID of sound information, the sound information being divided into equal predetermined sizes and placed in order of playback corresponding to the elapsed time:

wherein the time sequence processing execution unit includes a first time sequence processing execution unit for designating the sound information in the first time sequence information corresponding to the elapsed time at predetermined times, when a name of the first time sequence information is shown by the time sequence processing control information:

wherein the playback means includes a sound playback unit for playing back the sound information.

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6. The multi-media information playback device of claim  
40 4. wherein the page information includes:

(a) the partial image list.

(b) the control information, and

45 (c) the time sequence control information including a  
name of a second time sequence information as time  
sequence information to be played back according to  
the time sequence processing start command, pairs of  
IDs of sound information and image information to be  
50 played back at predetermined times, and the playback  
state information which describes at least one of  
dynamic picture and animation should be displayed in  
an area relating to the partial image shown by the  
partial image information;

55 wherein the time sequence information includes the sec-  
ond time sequence information comprising sound  
information divided into equal predetermined sizes and  
image information showing an image of at least one of  
the dynamic picture and the animation, the sound  
information and the image information being placed in  
60 order of playback corresponding to the elapsed time;

wherein the time sequence processing execution unit  
includes a second time sequence processing execution  
unit for designating sound information and image infor-  
mation in the second time sequence information cor-  
65 responding to the elapsed time at predetermined times  
when the second time sequence information is shown  
by the time sequence processing control information,  
and instructing the display data creation means to  
create new display data by placing the partial image  
read by the time sequence information read means in an  
area shown by the playback state information;

wherein the display data creation means creates new  
display data according to the second time sequence  
processing execution unit.

7. (Amended) A multi-media information record device

for recording multi-media information in a disc, comprising:

5 (a) a partial image storage means for storing the  
partial image information of at least one partial image in one  
partial image file, the partial image information being a part  
of the screen image;

(b) a partial image list input means for receiving  
input of a name of at least one partial image file in the partial  
image storage means and display state information showing  
display state of the partial image shown by the partial image  
information in the partial image file;

(c) a page information storage means for having a plurality of separate small storage areas, each of which is used for storing at least a piece of page information which is made up of multi-media information that describes contents of a plurality of screen images;

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(d) a partial image list write means for writing a pair of the partial image information and the display state information in a first small storage area in the page information storage means along with the Ids of the partial image information and the display state information, after reading partial image information from the partial image file whose name is inputted, the display state information being inputted according to the partial image information;

(e) a control information input means for receiving input of control information which includes a name of input signal and display state change command instructing to change display state of the partial image corresponding to the input signal;

(f) a control information write means for writing the inputted control information in a second small storage area in the page information storage means; and

(g) a page information record means for [successively] recording information, which is written as a piece of page information in each small storage area in the page information storage means, in a storage area on the disc.

8. The multi-media information record device of claim 7, wherein the control information includes animation display command instructing to change and display state information of the partial image corresponding to the elapsed time: 50

wherein the control information input means further includes an animation display command input unit for receiving input of a pair of an input signal and the animation display command: 55

wherein the multi-media information record device further includes:

(a) a time sequence control information input means for receiving time sequence control information including animation control information, the animation control information describing how display state of the partial image changes according to the elapsed time: and 60

(b) a time sequence control information write means for writing the inputted time sequence control information in a third small storage area in the page information storage means. 65

9. The multi-media information record device of claim 8, wherein the partial image list input means further includes a display state information input unit for receiving input of display state information for each piece of partial image information, the display information including X-Y coordinates showing a display position of the partial image to be displayed on the screen, X-Y enlargement rates showing a ratio of size of the partial image shown by the partial image information and a partial image to be displayed on the screen, and a rotational angle between the partial image shown by the partial image information and a partial image to be displayed on the screen; 10

wherein the time sequence control information input means receives input of animation control information which describes how at least one among the values of the X-Y coordinates, the X-Y enlargement rates, and the rotational angle changes corresponding to the elapsed time. 15

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10. A multi-media information playback device for reading multi-media information from a data server connected via a network and playing back the multi-media information, comprising:

- (a) a page information read means for reading a piece of page information, which is made up of multi-media information that describes contents of a plurality of screen images, stored as one file from a data server connected via a network, the page information including:
  - (1) a partial image list having at least one pair of the partial image information showing a partial image of a screen image and display state information describing display state of the partial image, and
  - (2) control information which describes a command to be executed according to an input signal, including a display state change command instructing to change the display state of the partial image;
- (b) a display data creation means for creating display data of the screen image by placing the partial image shown by the partial image information on a screen;
- (c) a display means for displaying each display data created by the display data creation means;
- (d) an input means for receiving an input signal from an operator; and
- (e) a command execution means for detecting the input signal inputted by the operator, judging whether the input signal corresponds to the command described by the control information in the page information read by the page information read means, and instructing the display data creation means to create new display data by changing the display state of the corresponding partial image according to the display state change command when the input signal corresponds to the display state change command;

wherein the display data creation means creates new display data according to the command execution means.

11. The multi-media information playback device of claim 10, wherein the page information including:

- (a) the partial image list;
- (b) the control information including the animation display instructing to change and display/state information of the partial image corresponding to the elapsed time;

and

- (c) time sequence control information including animation control information which describes values of display state information of the partial image corresponding to the elapsed time;

wherein the command execution means includes:

- (a) a first timer for measuring the elapsed time after start of activation; and
- (b) an animation display command execution unit for activating the first timer when an input signal corresponding to the animation display command is detected, calculating values of the display state information corresponding to the elapsed time of each of the partial images based on the animation control information at predetermined times, instructing the display data creation means to create new display data by changing the display state of the partial image according to the calculated values of the display state information, and stopping the first timer when execution of the animation display command is completed;

wherein the display data creation means creates new display data according to the animation display command execution unit.

12. The multi-media information playback device of claim 11, wherein the page information including:

- (a) the partial image list having of at least one pair of the partial image information and the display state information including X-Y coordinates showing a display position of the partial image to be displayed on the screen, X-Y enlargement rates showing a ratio of size of the partial image shown by the partial image information and the partial image to be displayed on the screen, and a rotational angle between the partial image shown by the partial image information and the partial image to be displayed on the screen; 25
- (b) the control information including the animation display command; and 30
- (c) time sequence control information including the animation control information which describes at least one among the values of the X-Y coordinates, the X-Y enlargement rates, and the rotational angle corresponding to the elapsed time; 35

wherein the animation display command execution unit includes:

- (a) an X-Y coordinates calculation unit for calculating the X-Y coordinates corresponding to the elapsed time based on the animation control information at predetermined times; 40
- (b) an X-Y enlargement rate calculation unit for calculating the X-Y enlargement rates corresponding to the elapsed time based on the animation control information at predetermined times; and 45
- (c) a rotational angle calculation unit for calculating the rotational angle corresponding to the elapsed time based on the animation control information at predetermined times. 50

13. The multi-media information playback device of claim 12, wherein the page information including: 55

- (a) the partial image list;
- (b) the control information including a time sequence processing start command instructing to start execution of time sequence processing corresponding to the elapsed time; and 60
- (c) time sequence control information including time sequence processing control information having a name of time sequence information to be played back according to the time sequence processing start command, Ids showing contents of the time sequence information to be played back at predetermined times, and playback state information describing how the time sequence information should be played back in accordance with display of the partial image shown by the partial image information in the partial image list; 65

wherein the command execution means includes:

- (a) a second timer for measuring the elapsed time after the start of activation; and
- (b) a time sequence processing execution unit for activating the second timer when an input signal corresponding to the time sequence processing start command is detected, designating contents of the time sequence information corresponding to the elapsed time, and stopping the second timer when playback of the time sequence information is completed; 10

wherein the multi-media information playback device further includes:

- (a) a page storage means, which is implemented by RAM, for storing the page information read by the page information read means; 15

25 (b) a time sequence information read means for reading contents of the time sequence information designated by the time sequence processing execution unit from the time sequence information stored as one file in the data server via a network, the time sequence information having contents in order of playback corresponding to the elapsed time and its name being included in the time sequence control information;  
30 and

(c) a playback means for playing back the time sequence information ready by the time sequence information read means, and instructing the display means to display the time sequence information.

35 14. The multi-media information playback device in claim 13, wherein the page information including:

(a) the partial image list;

(b) the control information; and

40 (c) time sequence control information including time sequence processing control information having a name of the first time sequence information as time sequence information to be played back according to the time sequence processing start command, sound information to be played back according to the elapsed time of the first time sequence information, and  
45 playback state information describing how the sound information should be played back in accordance with display of the partial image shown by partial image information in the partial image list;

50 wherein the time sequence processing execution unit includes a first time sequence processing execution unit for designating the sound information in the first time sequence information corresponding to the elapsed time at predetermined times, when a name of the first time sequence information is shown by the time sequence processing control information;  
55 wherein the time sequence information read means reads the sound information designated by first time sequence processing execution unit from the first time sequence information stored as one file in the data server, the first time sequence information describing the divided sound information in order of playback corresponding to the elapsed time and its name being included in the time sequence control information;

60 wherein the playback means includes a sound playback unit for playing back the sound information.  
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15. The multi-media information playback device of claim 13, wherein the page information including:

(a) the partial image list;

(b) the control information; and

(c) the time sequence control information including a name of the second time sequence information as time sequence information to be played back according to the time sequence processing start command, a pair of sound information and image information to be played back corresponding to the elapsed time of the second time sequence information, and playback state information which describes at least one of dynamic picture and animation should be displayed in the area relating to the partial image shown by the partial image information;  
10  
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wherein the time sequence processing execution unit includes a second time sequence processing execution unit for designating sound information and image information in the second time sequence information corresponding to the elapsed time at predetermined times when the second time sequence information is shown by the time sequence processing control information, and instructing the display data creation means to create new display data by placing the partial image read by the time sequence information read means in an area shown by the playback state information;

wherein the time sequence information read means reads the sound information and the screen image information designated by the second time sequence processing execution unit from the second time sequence information stored as one file in the data server, the time sequence information describing the divided sound information in order of playback and the screen image information describing one screen image of at least one of motion picture and animation corresponding to the elapsed time and its name being included in the time sequence control information;

wherein the display data creation means creates new display data according to the second time sequence processing execution unit.

16. A multi-media information record device for recording multi-media information in a data server connected via a network, comprising:

- (a) a partial image storage means for storing the partial image information of at least one partial image in one partial image file, the partial image information being a part of the screen image;
- (b) a partial image list input means for receiving input of a name of at least one partial image file in the partial image storage means and display state information showing display state of the partial image shown by the partial image information in the partial image file;
- (c) a page information storage means for having a plurality of separate small storage areas, each of which is used for storing at least a piece of page information which is made up of multi-media information that describes contents of a plurality of screen images;
- (d) a partial image list write means for writing a pair of the partial image information and the display state information in a first small storage area in the page information storage means along with the IDs of the partial image information and the display state information, after reading partial image information from the partial image file whose name is inputted, the display state information being inputted according to the partial image information;
- (e) a control information input means for receiving input of control information which includes a name of input signal and display state change command instructing to change display state of the partial image corresponding to the input signal;
- (f) a control information write means for writing the inputted control information in a second small storage area in the page information storage means; and
- (g) a page information record means for recording contents of a piece of page information in one file in the data server after transmitting contents written as a piece of page information in each storage area in the page information storage means to a data server along with its write request.

15 17. The multi-media information record device of claim  
16, wherein the control information includes animation  
display command instructing to change and display state  
information of the partial image corresponding to the  
elapsed time;

20 wherein the control information input means further  
includes an animation display command input unit for  
receiving input of a pair of an input signal and the  
animation display command;

25 wherein the multi-media information record device fur-  
ther includes:

(a) a time sequence control information input means for  
receiving time sequence control information includ-  
ing animation control information, the animation  
control information describing how display state of  
30 the partial image changes according to the elapsed  
time; and

(b) a time sequence control information write means for  
writing the inputted time sequence control informa-  
tion in a third small storage area in the page infor-  
35 mation storage means.

18. The multi-media information record device of claim  
17, wherein the partial image list input means further  
includes a display state information input unit for receiving  
40 input of display state information for each piece of partial  
image information, the display information including X-Y  
coordinates showing a display position of the partial image  
to be displayed on the screen, X-Y enlargement rates show-  
ing a ratio of size of the partial image shown by the partial  
45 image information and a partial image to be displayed on the  
screen, and a rotational angle between the partial image  
shown by the partial image information and a partial image  
to be displayed on the screen;

wherein the time sequence control information input  
50 means receives input of animation control information  
which describes how at least one among the values of  
the X-Y coordinates, the X-Y enlargement rates, and  
the rotational angle changes corresponding to the  
elapsed time.

19. (Amended) A multi-media information record device for record-  
ing multi-media information in a disc, comprising:

(a) a partial image storage means for storing the partial  
image information of at least one partial image in one  
partial image file, the partial image information being  
60 a part of the screen image;

(b) a partial image list input means for receiving input of  
a name of at least one partial image file in the partial  
image storage means and display state information  
showing display state of the partial image shown by the  
65 partial image information in the partial image file;

wherein the partial image list input means further includes  
a display state information input unit for receiving

input of display state information for each piece of partial image information, the display information including X-Y coordinates showing a display position of the partial image to be displayed on the screen, X-Y enlargement rates showing a ratio of size of the partial image shown by the partial image information and a partial image to be displayed on the screen, and a rotational angle between the partial image shown by the partial image information and a partial image to be displayed on the screen;

(c) a page information storage means for having a plurality of separate small storage areas, each of which is used for storing at least a piece of page information;

(d) a partial image list write means for writing a pair of the partial image information and the display state information in a first small storage area in the page information storage means along with the Ids of the partial image information and the display state information, after reading partial image information from the partial image file whose name is inputted, the display state information being inputted according to the partial image information;

(e) a control information input means for receiving input of control information which includes a name of input signal and display state change command instructing to change display state of the partial image corresponding to the input signal;

wherein the control information includes animation display command instructing to change and display state information of the partial image corresponding to the elapsed time;

wherein the control information input means further includes an animation display command input unit for receiving input of a pair of an input signal and the animation display command;

(f) a control information write means for writing the inputted control information in a second small storage area in the page information storage means;

(g) a page information record means for [successively] recording information, which is written as a piece of page information in each small storage area in the page information storage means, in a storage area on the disc;

(h) a time sequence control information input means for receiving time sequence control information including animation control information, the animation control information describing how display state of the partial image changes according to the elapsed time;

wherein the time sequence control information input means receives input of animation control information which describes how at least one among the values of the X-Y coordinates, the X-Y enlargement rates, and the rotational angle changes corresponding to the elapsed time;

(i) a time sequence control information write means for writing the inputted time sequence control information in a third small storage area in the page information storage means;

(j) a time sequence information storage means having a piece of time sequence information stored in each time sequence information file, the time sequence information having information written in order of playback corresponding to the elapsed time; and

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(k) a time sequence information means for [successively] recording time sequence information in a storage area on the disc after receiving input of a name of at least one time sequence information file in the time sequence information storage means, reading time sequence information from the time sequence information file whose name is inputted and correlating the time sequence information with a name of time sequence information corresponding to the name of the file;

10 wherein the control information input means further includes a time sequence processing start command input unit for receiving input of a pair of an input signal and a time sequence processing start command in the control information, the time sequence processing start command instructing to start execution of time  
15 sequence processing corresponding to the elapsed time and being included in the control information;

20 wherein the time sequence control information input means further includes a time sequence processing control information input unit for receiving input of the time sequence processing control information which includes a name of time sequence information to be played back according to the time sequence processing start command, IDs showing contents of the time  
25 sequence information to be played back at predetermined times, and playback state information which describes how the time sequence information should be played back in accordance with display of the partial image list, the time sequence processing control information being included in the time sequence control  
30 information.

35 20. The multi-media information record device of claim 19, wherein the time sequence information includes first time sequence information in which sound information is divided into predetermined equal data sizes, the sound information being written along with its ID in order of playback corresponding to the elapsed time;

40 wherein the time sequence information record means includes a first time sequence information record unit for recording first time sequence information in the disc after reading the first time sequence information from the time sequence information file, whose name is inputted, when a name of the first time sequence information is inputted; and



wherein the time sequence processing control information input unit includes first time sequence processing control information input unit for receiving input of first time sequence processing control information which includes a name of first time sequence information to be played back according to time sequence processing start command of the page information. Ids of sound information to be played back at predetermined times, and playback state information which describes how the sound information should be played back in accordance with display of the partial image shown by the partial image information in the partial image list, the first time sequence control information being included in the time sequence processing control information.

21. The multi-media information record device of claim 19, wherein the time sequence information record means includes a second time sequence information record unit for recording second time sequence information in the disc after reading the second time sequence information from the time sequence information file, whose name is inputted, when a name of the second time sequence information is inputted, the second time sequence information having sound information divided into predetermined equal data sizes, image information showing one screen image of at least one of

animation and dynamic picture and Ids of the sound information and the image information written in order of playback corresponding to the elapsed time; and

wherein the time sequence processing control information input unit includes a second time sequence processing control information input unit for receiving input of second time sequence processing control information which includes a name of second time sequence information to be played back according to time sequence processing start command of the page information, pairs of Ids of sound information and image information to be played back at predetermined times, and the playback state information describing at least one of dynamic picture and animation should be displayed in an area relating to partial image shown by the partial image information in the partial image list.

22. A multi-media information record device for recording multi-media information in a data server connected via a network, comprising:

- (a) a partial image storage means for storing the partial image information of at least one partial image in one partial image file, the partial image information being a part of the screen image;
- (b) a partial image list input means for receiving input of a name of at least one partial image file in the partial image storage means and display state information showing display state of the partial image shown by the partial image information in the partial image file;
- (c) a page information storage means for having a plurality of separate small storage areas, each of which is used for storing at least a piece of page information which is made up of multi-media information that describes contents of a plurality of screen images;
- (d) a partial image list write means for writing a pair of the partial image information and the display state information in a first small storage area in the page information storage means along with the Ids of the partial image information and the display state information, after reading partial image information from the partial image file whose name is inputted, the display state information being inputted according to the partial image information;

wherein the partial image list input means further includes a display state information input unit for receiving input of display state information for each piece of partial image information. the display information including X-Y coordinates showing a display position of the partial image to be displayed on the screen. X-Y enlargement rates showing a ratio of size of the partial image shown by the partial image information and a partial image to be displayed on the screen. and a rotational angle between the partial image shown by the partial image information and a partial image to be displayed on the screen:

(e) a control information input means for receiving input of control information which includes a name of input signal and display state change command instructing to change display state of the partial image corresponding to the input signal:

wherein the control information includes animation display command instructing to change and display state information of the partial image corresponding to the elapsed time;

wherein the control information input means further includes an animation display command input unit for receiving input of a pair of an input signal and the animation display command:

(f) a control information write means for writing the inputted control information in a second small storage area in the page information storage means:

(g) a page information record means for recording contents of a piece of page information in one file in the data server after transmitting contents written as a piece of page information in each storage area in the page information storage means to a data server along with its write request;

(h) a time sequence control information input means for receiving time sequence control information including animation control information. the animation control information describing how display state of the partial image changes according to the elapsed time:

wherein the time sequence control information input means receives input of animation control information which describes how at least one among the values of the X-Y coordinates. the X-Y enlargement rates. and the rotational angle changes corresponding to the elapsed time:

(i) a time sequence control information write means for writing the inputted time sequence control information in a third small storage area in the page information storage means:

(j) a time sequence information storage means having a piece of time sequence information stored in each time sequence information file. the time sequence information having information written in order of playback corresponding to the elapsed time: and

(k) a time sequence information record means for recording contents of time sequence information in one file in the data server for each piece of time sequence information. after receiving a name of at least one time sequence information file in the time sequence information storage means. reading time sequence information from the time sequence information file whose name is inputted. correlating the time sequence information with a name of time sequence information corresponding to the file. and transmitting the time sequence information to the data server along with its write request:

wherein the control information input means further includes a time sequence processing start command input unit for receiving input of a pair of an input signal and a time sequence processing start command in the control information, the time sequence processing start command instructing to start execution of time sequence processing corresponding to the elapsed time and being included in the control information; wherein the time sequence control information input means further includes a time sequence processing control information input unit for receiving input of the time sequence processing control information which includes a name of time sequence information to be played back according to the time sequence processing start command, IDs showing contents of the time sequence information to be played back at predetermined times, and playback state information which describes how the time sequence information should be played back in accordance with display of the partial image shown by the partial image information in the partial image list, the time sequence processing control information being included in the time sequence control information.

23. The multi-media information record device of claim 22, wherein the time sequence information includes first time sequence information in which sound information is divided into predetermined equal data sizes, the sound information being written along with its ID in order of playback corresponding to the elapsed time; wherein the time sequence information record means includes a first time sequence information record unit for recording first time sequence information in the disc after reading the first time sequence information from the time sequence information file, whose name is inputted, when a name of the first time sequence information is inputted; wherein the time sequence processing control information input unit includes first time sequence processing control information input unit for receiving input of first time sequence processing control information which includes a name of first time sequence information to be played back according to time sequence processing start command of the page information, IDs of sound information to be played back at predetermined times, and playback state information which describes how the sound information should be played back in accordance with display of the partial image shown by the partial image information in the partial image list, the first time sequence control information being included in the time sequence processing control information.

24. The multi-media information record device of claim 22, wherein the time sequence information record means includes a second time sequence information record unit for recording second time sequence information in the disc after reading the second time sequence information from the time sequence information file, whose name is inputted, when a name of the second time sequence information is inputted, the second time sequence information having sound information divided into predetermined equal data sizes, image information showing one screen image of at least one of animation and dynamic picture and IDs of the sound information and the image information written in order of playback corresponding to the elapsed time;

wherein the time sequence processing control information --  
input unit includes a second time sequence processing  
control information input unit for receiving input of  
second time sequence processing control information  
which includes a name of second time sequence infor-  
mation to be played back according to time sequence 40  
processing start command of the page information.  
pairs of IDs of sound information and image infor-  
mation to be played back at predetermined times, and the  
playback state information describing at least one of  
dynamic picture and animation should be displayed in 45  
an area relating to partial image shown by the partial  
image information in the partial image list.

25. (Amended) A multi-media information playback device which  
plays back multi-media information recorded in a recording  
medium comprising: 50

- (a) a disc having pieces of page information [successively]  
stored in a storage area, each piece of page information  
being made up of multi-media information that describes  
contents of a plurality of screen images, the page  
information including:

(1) a partial image list having a pair of partial image  
information showing a partial image of a screen  
image and display state information showing display  
state of the partial image.

(2) control information which describes a command to 60  
be executed according to an input signal, the control  
information including:

a display state change command instructing to  
change the display state of the partial image;

an animation display command instructing to change 65  
and display the display state information of the  
partial image corresponding to elapsed time; and  
a time sequence processing start command instruct-  
ing to start execution of time sequence processing  
corresponding to the elapsed time;

(3) time sequence control information having  
information, which should be played back according  
to the elapsed time, stored in order of playback, the  
time sequence control information including:

(a) animation control information which describes  
values of the display state information of the  
partial image corresponding to the elapsed time;  
and

(b) time sequence processing control information  
having a name of time sequence information to be  
played back according to the time sequence pro-  
cessing start command, IDs showing contents of  
the time sequence information to be played back at  
predetermined times, and playback state informa-  
tion describing how the time sequence informa-  
tion should be played back in accordance with  
display of the partial image shown by the partial  
image information in the partial image list;

(b) a page information read means for reading a piece of  
page information from the disc;

(c) a display data creation means for creating display data  
of the screen image by placing the partial image shown  
by the partial image information on a screen;

(d) a display means for displaying each display data  
created by the display data creation means;

30 (e) an input means for receiving an input signal from an operator; and

(f) a command execution means for detecting the input signal inputted by the operator, judging whether the input signal corresponds to the command described by the control information in the page information read by the page information read means, and instructing the display data creation means to create new display data by changing the display state of the corresponding partial image according to the display state change command when the input signal corresponds to the display state change command; the command execution means including:

(1) a first timer for measuring the elapsed time after start of activation;

45 (2) an animation display command execution unit for activating the first timer when an input signal corresponding to the animation display command is detected, calculating values of the display state information corresponding to the elapsed time of each of the partial images based on the animation control information at predetermined times, instructing the display data creation means to create new display data by changing the display state of the partial image according to the calculated values of the display state information, and stopping the first timer when execution of the animation display command is completed;

(3) a second timer for measuring the elapsed time after the start of activation; and

60 (4) a time sequence processing execution unit for activating the second timer when an input signal corresponding to the time sequence processing start command is detected, designating contents of the time sequence information corresponding to the elapsed time, and stopping the second timer when playback of the time sequence information is completed;

wherein the display data creation means creates new display data according to the animation display command execution unit;

(g) a page storage means, which is implemented by RAM, for storing the page information read by the page information read means;

(h) a time sequence information read means for reading the time sequence information designated by the time sequence processing execution unit from the disk; and

10 (i) a playback means for playing back the time sequence information read by the time sequence information read means, and instructing the display means to display the time sequence information.

26. (Amended) A multi-media information playback device which plays back multi-media information recorded in a recording medium comprising:

(a) a disc having pieces of page information [successively]

stored as one file from a data server connected via a

network, each piece of page information being made up of

multi-media information that describes contents of a

plurality of screen images, the page information including:

- (1) a partial image list having a pair of partial image information showing a partial image of a screen image and display state information showing display state of the partial image. 25
- (2) control information which describes a command to be executed according to an input signal. the control information including: 30
- a display state change command instructing to change the display state of the partial image;
  - an animation display command instructing to change and display the display state information of the partial image corresponding to elapsed time; and 35
  - a time sequence processing start command instructing to start execution of time sequence processing corresponding to the elapsed time:
- (3) time sequence control information having information, which should be played back according to the elapsed time. stored in order of playback. the time sequence control information including: 40
- (a) animation control information which describes values of the display state information of the partial image corresponding to the elapsed time; 45 and
  - (b) time sequence processing control information having a name of time sequence information to be played back according to the time sequence processing start command. IDs showing contents of the time sequence information to be played back at predetermined times. and playback state information describing how the time sequence information should be played back in accordance with display of the partial image shown by the partial image information in the partial image list: 55
- (b) a page information read means for reading a piece of page information from the disc;
- (c) a display data creation means for creating display data of the screen image by placing the partial image shown by the partial image information on a screen: 60
- (d) a display means for displaying each display data created by the display data creation means;
- (e) an input means for receiving an input signal from an operator: and
- (f) a command execution means for detecting the input signal inputted by the operator. judging whether the input signal corresponds to the command described by the control information in the page information read by the page information read means. and instructing the display data creation means to create new display data by changing the display state of the corresponding partial image according to the display state change command when the input signal corresponds to the display state change command: the command execution means including:
- (1) a first timer for measuring the elapsed time after start of activation;
  - (2) an animation display command execution unit for activating the first timer when an input signal corresponding to the animation display command is detected. calculating values of the display state information corresponding to the elapsed time of each of the partial images based on the animation control information at predetermined times. instructing the display data creation means to create new display data by changing the display state of the partial image according to the calculated values of the display state information. and stopping the first timer when execution of the animation display command is completed:

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(3) a second timer for measuring the elapsed time after the start of activation; and

35 (4) a time sequence processing execution unit for activating the second timer when an input signal corresponding to the time sequence processing start command is detected, designating contents of the time sequence information corresponding to the elapsed time, and stopping the second timer when  
40 playback of the time sequence information is completed;

wherein the display data creation means creates new display data according to the animation display command execution unit;

45 (g) a page storage means, which is implemented by RAM, for storing the page information read by the page information read means;

50 (h) a time sequence information read means for reading the time sequence information designated by the time sequence processing execution unit from the time sequence information stored as one file in the data server via a network, the time sequence information having contents in order of playback corresponding to the elapsed time and its name being included in the time  
55 sequence control information; and

(i) a playback means for playing back the time sequence information read by the time sequence information read means, and instructing the display means to display the time sequence information.

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